THE WATER SPOT

BITS OF INFORMATION FROM THE HAWAI`I SAFE DRINKING WATER BRANCH

Volume 3, Issue 1 **January/February 1999** **Phone: (808) 586-4258**

ARE YOU READY FOR THE Y2K -- THINGS TO CONSIDER

With less than one year before the coming of the dreaded "millennium bug" everyone is either scrambling to be Y2K compliant or eagerly waiting to see what happens when the clock strikes "12".

Things to consider while scrambling or waiting:

IMPORTANT DATES TO CHECK FOR THE "MILLENNIUM BUG"

DATE	REASON FOR CONCERN
01/01/1999	Systems that look one year ahead may fail
04/09/1999	Special-use Julian date (99th day of 99th year)
07/01/1999	Global Positioning System date rollover affects military, transportation, Geographic Information System, and Automatic Vehicle Locator
08/21/1999	Programmers use 9/9/99 as an end of file or infinity; will cause numerous problems (ninth day of ninth month of 99th year)
10/01/1999	Federal government and others begin FY 2000
12/31/1999	End-of-year baseline (to be used in rollover scenario)
01/01/2000	Date rollover will halt, confuse, or otherwise disrupt many systems and devices
01/02/2000	First 24-hour look back period
01/10/2000	First date requiring full use of seven digits
02/28/2000	Day prior to Leap Year (to be used in rollover scenarios)
02/29/2000	Many systems will not recognize Leap Year in 2000
02/30/2000	Invalid date. Test to ensure that Leap Year logic is functioning
03/01/2000	First valid date after Leap Year
10/10/2000	First date requiring full use of eight digits; may cause failures
12/31/2000	Some systems using Julian dates may not recognize the 366th day of the Leap Year
01/01/2001	First date in 2001. Check rollover functions.

THINGS TO CONSIDER IN YOUR CONTINGENCY PLANS

CAUSE	EFFECT	POSSIBLE CONTINGENCIES
Power failure	Pumping stations unable to pump water into system or operating treatment plants.	Have on-site emergency power generating capacity to operate critical treatment processes. Consider use of hydroelectric, solar power, or biogases that are generated on site as emergency fuel sources.
Vendors experience Y2K caused failures	No chemicals or spare parts are available.	Stockpile additional chemicals, supplies, fuel oil, spare parts.
Telecommunications systems fail	No communication between central and remote locations; inaccurate or no data recorded or reported.	Use two-way radios to monitor or control remote locations manually.
Supervisory Control and Data Acquisition (SCADA) system fails.	System may not report accurate data or may report no data at all; operator may not be able to control plant operations.	Plan for additional operating personnel, equipped with two-way radios, to manually operate critical treatment processes.
Laboratory equipment malfunction	Cannot track samples; inaccurate analytical data or no data reported.	Provide additional operating personnel, skilled in laboratory procedures, to analyze and record data. Include a system to provide needed laboratory results to the operating personnel so plant can continue to run effectively. If using an off-site or contract laboratory service, be sure they are Y2K compliant.
Customer billing, payroll, scheduling, ordering and invoicing, inventory and other administrative management systems fail.	Over billing or no billing of customers; inaccurate payroll information; orders and invoicing of needed materials, chemicals, and supplies disrupted.	Additional operating personnel needed to perform administrative functions manually.
HVAC system failure	No AC for occupied areas or key processes resulting in heating; lack of ventilation resulting in odors, volatile vapors and hazardous fumes building up in confined spaces leading to toxic or explosive atmospheres (such as in pumping stations, tunnels, sumps and pits, sludge gas processing buildings, and other enclosed areas)	Emergency generators or alternate power sources needed for proper ventilation to be maintained; space coolers and portable ventilators should be on hand.
Security system failure	Security gates and doors may not open or lock, card readers may not function, fire alarm systems may not work.	Additional security personnel need to be available. Make sure employees can enter and exit facilities.

<u>IN THE NEXT ISSUE OF THE WATER SPOT</u>:

(1) Possible locations of embedded chips in drinking water and wastewater treatment facilities; and

(2) Important websites to get Y2K information.

CAPACITY DEVELOPMENT HAPPENINGS

The Safe Drinking Water Act Amendments of 1996 require each State to develop and implement two plans: A plan to prevent a new water system with inadequate capacity from beginning operation after October 1, 1999 and a plan to implement a capacity development strategy to provide assistance to existing water systems.

Our progress and goals for developing the plans follow:

==> We held a stakeholder group review of our capacity evaluation plan for **new water systems**, entitled New Community and New Nontransient Noncommunity Water System Start-Up Requirements in November 1998.

The stakeholder group consisted of representatives from the:

- Land Use Research Foundation
- AWWA Small Water Systems Section
- Maui Land and Pineapple Company
- West Hawaii Water Company
- Hawaii Association of Realtors
- Rural Community Assistance Corporation
- American Savings Bank
- Campbell Estates

==> In January 1999, we plan to hold another stakeholder group meeting to review the **existing water system** plan entitled: Capacity Development Strategic Plan for Existing Public Water Systems.

==> We expect to have the **new water system** and the **existing water system** plans ready for your review and comment by early March 1999. We need your help to write practicable plans which actually assist public water systems.

==> Public meetings will be held on all islands by the end of June 1999.

On the subject of water system operator and manager training:

==> We have a contractor interested in providing the training for water system operators and managers. The training will be offered free of charge. Our goal is to have a contract signed by mid-April 1999.

We welcome any thoughts you may have on the training program. You can FAX your comments to us at (808) 586-4370 or call Don Yasutake at (808) 586-4258.

EPA RELEASES PREAMBLE TO THE GROUND WATER RULE

EPA has released a draft preamble (dated January 15, 1999) for the Ground Water Rule. The preamble document outlines the proposed approach EPA is taking to meet the requirements of the rule. EPA's approach will rely on four major components: (1) requiring periodic sanitary surveys for all public water systems; (2) source water monitoring for systems deemed vulnerable to contamination; (3) requirements for states corrective action authority and correction of state-identified significant defects; and (4) required treatment where contamination or significant defects cannot be corrected.

To get a copy of the draft preamble:
(1) Visit the ASDWA web page (www.asdwa.org) to download a .pdf version; or
(2) Contact the Safe Drinking Water Hotline at 1-800-426-4791

Comments on the proposed draft are due to EPA by February 19, 1999.

SDWB ENGINEERING SECTION - 1998 YEAR IN REVIEW

New Source Approvals

For the calendar year 1998, a total of ten (10) source approvals were issued through the engineering section. The following is a summary of the sources approved through the engineering section for the 1998 calendar year (listed in chronological order):

Date	Name of Source	State Well #	Public Water System
02/27/98	Waimea Country Club Well	8-6235-01	PWS #130 DWS South Kohala EMERGENCY Approval expired 08/31/98
03/19/98	Kapue Stream		PWS #107 DWS Papaikou EMERGENCY approval expired 05/31/98
05/05/98	Haiku Well	6-5419-01	PWS #213 DWS Makawao
05/05/98	Parker Ranch Well No. 1	8-6239-02	PWS #130 DWS South Kohala
06/03/98	Honokohau Well	8-4158-02	PWS #131 DWS North Kona
06/04/98	Hualalai Exploratory Well	8-4258-03	PWS #131 DWS North Kona
06/04/98	Piihonua Well "C"	8-4208-01	PWS #101 DWS Hilo
07/17/98	Keonepoko Nui Well No. 2	8-3188-02	PWS #111 DWS Pahoa
10/14/98	Kaupakulua Well	6-5318-01	PWS #213 DWS Makawao
11/16/98	Parker Well No. 2	8-5846-02	PWS #160 DWS Lalamilo

Lead and Copper

SDWB continues to target those systems which have previously exceeded an action level but later demonstrated compliance in a subsequent monitoring period. As of December 1998, the following systems exceeded either the lead or copper action level, or both.

PWS No.	Public Water System Name	Action Level(s) Exceeded
130	DWS South Kohala	Pb
139	DWS Niulii	Pb & Cu
213	DWS Makawao	Pb
218	DWS Honokohau	Pb
220	DWS Nahiku	Pb
245	DWS Kipu	Pb
247	DWS Lower Kula	Pb

PWS No.	Public Water System Name	Action Level(s) Exceeded
103	DWS Ninole	Cu
105	DWS Honomu	Cu
106	DWS Pepeekeo	Cu
128	DWS Halaula	Cu
163	Kaupulehu	Cu
234	DWS Kaunakakai	Cu
420	Kokee Air Guard	Cu

This list may change as some of these water systems are pursuing additional lead and copper testing on their own. All public water systems that exceed the action levels are required to take specific action, including but not limited to, public notification, public education, water quality parameter monitoring, source monitoring, optimal corrosion control treatment recommendation, etc., as described in the EPA's national primary drinking water regulations for lead and copper (a.k.a., "Lead & Copper Rule"). Although it is not a violation to exceed the lead or copper action levels, it is one to fail to perform the required follow-up actions.

December 30, 1998 (DOH-OD #98-111)
Minute amounts of chemicals found in state drinking water systems

During routine sampling of drinking water systems across the state, the Department of Health (DOH) has found minute trace amounts of organic chemicals in separate water systems. None of the chemicals discovered were at levels that represent a significant health threat.

BWS Waipahu I Pumps # and 4 and Haleiwa Pump 2: Trichloroethylene (TCE) confirmed in samples at levels between 0.2 and 0.5 micrograms per liter or parts per billion (ppb). The federal maximum contaminant level (MCL) is 5 ppb. At Waipahu I, the water is treated with granulated activated carbon and the treated water does not contain TCE. Trichloroethylene is a common metal cleaning and dry-cleaning fluid. It generally gets into drinking water by improper waste disposal.

Punalu`u Well 2 (Big Island) and BWS Makaha I Well: Isophorone. Isophorone is not a regulated contaminant, so does not have a MCL value. EPA has set drinking water health advisories for a lifetime exposure at 100 ppb and has estimated a cancer risk of 1 in 1,000,000 at 40 ppb. The concentration found ranged from 1.0 to 3.6 ppb (at Punalu`u II) and 0.6 to 1.2 ppb (at Makaha I) , well below the EPA's health advisories. Isophorone is used in some herbicides and pesticides. It is also commonly used as a solvent in paints, coatings, and adhesives.

Hawai`i Volcanoes National Park: Ethylbenzene. Confirmed in HVNP's water catchment system. The concentration of ethylbenzene was between 0.3 and 1.0 ppb, well below the federal MCL of 700 ppb. Ethylbenzene is a major component of gasoline. It is also used in pesticides and paints.

Anahola Farm Lots (Kaua`i): Phenanthrene. The concentration was between 0.05 to 0.07 ppb. Phenanthrene belongs to the polycyclic aromatic hydrocarbons (PAHs) and is not a regulated contaminant. EPA does not have health advisories for this contaminant due to insufficient evidence of any health effect. Possible sources of PAHs in drinking water are: coal tar coatings, burning organic matter, volcanic activity, and fossil fuels such as gasoline.

"The levels of these chemicals are well below federal standards and do not pose any significant health risks," said Bruce Anderson, Deputy director for Environmental Health. "But these findings remind us to always be vigilant in protecting our environment."

The DOH will continue to monitor these sources to ensure that public health is not compromised.

January 6, 1999 (Released by the U.S. Army - DPW Environmental)

The Tripler Army Medical Center Campus water system exceeded the state and federal standard for fecal coliform bacteria. Those affected were notified not to drink water from their taps and to boil water prior to drinking or using for cooking. Bottled water for drinking was provided to patients and staff while small water supply tanks were used to provide water for drinking and cooking to families in 280 military housing units at Tripler.

CHLORINE RESIDUAL READINGS NOW REQUIRED FOR SOME CHEMICAL SAMPLES

Chemical monitoring samples will now need to report chlorine residual (if the samples are taken at points after chlorination). Chlorine residual readings must be reported on the revised chain-of-custody forms.

At the laboratory, new quality assurance efforts will include the lab testing control samples for chlorine residual to verify that sufficient sodium thiosulfate was added to neutralize residual chlorine. Temperature and pH readings will also be taken as the samples are turned into the laboratory.

In order to accomplish this quality assurance step, the SDWB will provide an additional sample container to be used for the control sample. Please be sure to include one control sample for each type of analysis in every batch of samples to be delivered to the laboratory.

SDWB ACCEPTING PROPOSED PROJECTS FOR DWSRF FUNDING

ATTENTION ALL Non-Federally Owned PUBLIC WATER SYSTEMS

The SDWB will be accepting **"Proposed Project for DWSRF Funding"** forms from **February 1 to March 29, 1999**. Because of the lead time necessary to fulfill all of the federal requirements, such as public review and comment, **all** submittals must be received by SDWB or postmarked no later than March 29, 1999.

The intent of the DWSRF is to assist water systems in constructing the infrastructure needed to address current and future compliance problems. **Qualifying** projects which will be implemented over the next three (3) years will be ranked and included in the annually updated Intended Use Plan (IUP) and Priority List. In general, those projects which address the most serious risks to public health and are necessary to ensure compliance with the Safe Drinking Water Act will be assigned the highest priority. Federal requirements also call for fifteen percent (15%) of the moneys available for funding projects to go to "small public water systems" (service population less than 10,000).

Please note that a submitted proposed project form and the inclusion of the project on the Priority List will not guarantee the issuance of a loan. Already, we anticipate that the demand for funding may exceed the amount available for federal fiscal year 1999. In addition, qualifying for a loan will depend upon a number of factors including, but not limited to, the water system's ability to repay the loan. Also, EPA essentially prohibits loans to be given to any public water system that does not have adequate technical, financial, and managerial capacity to comply with National Primary Drinking Water Regulations. Such factors are critical as it is the goal to maintain a self sustaining fund that will be perpetually available to help all qualifying water systems. This is not a grant program!

Please note that you must complete one form for each project you wish to be considered. If your project was on a previous priority list, you may reaffirm your interest in receiving a SRF loan by writing to the SDWB or simply resubmitting the form if information needs to be updated.

We look forward to receiving your completed "Proposed Project for DWSRF Funding" form(s) and working with you to address any drinking water compliance problems. If you have any questions, please contact Stuart Yamada at 586-4258.

Unfortunately, the DWSRF is not currently capable of issuing loans to privately owned, public water systems. However, proposed projects for privately owned, public water systems will still be accepted and their projects included on the priority list, as it is our intent to develop procedures that will allow all eligible water systems to apply for DWSRF assistance. In addition, listing all proposed projects will help document the need for continued and increased funding of the DWSRF.

A copy of the "Proposed Project for DWSRF Funding" form was included in this newsletter.

The Water Spot is published by the Safe Drinking Water Branch, Environmental Management Division of the Hawai`i State Department of Health and is distributed to water purveyors, water system operators, staff, consultants, and other interested parties.

Please send your suggestions, ideas or comments to:

THE WATER SPOT NEWSLETTER
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State Department of Health
919 Ala Moana Blvd., Room 308
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***OR** Fax us at (808) 586-4370, Attention: "**THE WATER SPOT**"*

SDWB WEB SITE:
http://www.hawaii.gov/doh/eh/sdwb
HISWAP WEB SITE:
http://www.aloha.net/~will/hiswap.html

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